

IDAHO DEPARTMENT OF FISH & GAME

Joseph C. Greenley, Director

FEDERAL AID TO FISH & WILDLIFE RESTORATION

Job Performance Report

Project F-71-R-3



REGIONAL FISHERY MANAGEMENT INVESTIGATIONS

- Job II-a. Region 2 Mountain Lake Investigations
- Job II-b. Region 2 Lowland Lake Investigations
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- Job II-e. Region 2 Salmon & Steelhead Investigations

Period Covered: 1 January 1978 to 31 December 1978

by

Wesley Cannon, Regional Fishery Manager
and
Steven A. Hoss, Regional Fishery Biologist

March, 1979

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JOB PERFORMANCE REPORT

State of Idaho

Name: REGIONAL FISHERY MANAGEMENT
INVESTIGATIONS

Project No. F-71-R-3

Title: Region 2 Mountain Lake Investigations

Job No. II-a

Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

A total of 37 mountain lakes were investigated during the summer of 1978.

We were fortunate to have two qualified Young Adult Conservation Corps (YACC) personnel available during 1978. These two fellows spent the entire summer on mountain lake surveys.

The enhancement of Fish Lake on the North Fork Clearwater River was continued in an effort to revitalize the westslope cutthroat trout population.

Authors:

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RECOMMENDATIONS

We recommend continuance of the mountain lake investigations to determine their morphological structure and contribution to the total fishery of Region 2.

OBJECTIVES

To determine the success and status of previous fish plants in the Dennis Lakes and Hidden Lake and to collect morphological data on all lakes visited during the summer of 1978.

TECHNIQUES USED

Visual observations were made on a number of mountain lakes to note spawning potential, success and locations. Species, abundance, lake accessibility and condition of the fish were recorded. Various angling techniques were used for fish collection.

We were able to survey numerous mountain lakes during 1978. This was accomplished with the assistance of two Young Adult Conservation Corps (YACC) individuals. A total of 37 mountain lakes were visited which included two lakes, Hidden and Dennis Lakes, that had been scheduled in the past. Many of the other lakes had not been visited in several years and the information we received on this survey was very useful in updating our files. (Random creel checks by Conservation Officers and other Department personnel were made on four mountain lakes. This data is summarized in Appendix 1.)

Mountain lake survey cards were filled out for each lake visited and a rough map of the lake with cross section distances, obtained with a range finder, were noted on the back. All the lakes will be included in this report. However, due to length, only species, size, abundance and spawning potential will be stated.

FINDINGS

Hidden Lake

Hidden Lake has been scheduled for surveying since it has been planted with grayling. Unfortunately it is now barren. There is excellent spawning potential in the inlet.

Middle Dennis Lake

Middle Dennis Lake has also been scheduled for surveying since it had been planted with grayling. There still is a medium abundance of grayling in the 76 mm (>3 in) category. However, there is also a high density of rainbow fishery for >76 mm (>3 in) fish. There is about 27 m (30 yd) of inlet spawning area.

East Dennis Lake

East Dennis Lake is barren and is too shallow to support fish.

West Dennis Lake

West Dennis Lake is barren with no spawning potential. However, it has adequate depth to support a fishery. We will schedule it for planting.

Swet Lake

Swet Lake has a high density of cutthroat in the >76 mm (>3 in) category. There is about 9 m (10 yd) of outlet spawning potential.

Hamilton Lake #1

Hamilton Lake #1 has a high density of cutthroat in the >76 mm (>3 in) category. There is 27 m (30 yd) of inlet spawning gravel.

Stripe Lake #1

Stripe Lake #1 contains a high density of >152 mm (>6 in) cutthroat trout. There is no available spawning area potential.

Stripe Lake #2

Stripe Lake #2 has an extremely high density of cutthroat trout. Fish ranged in size from fry to 406 mm (16 in). There is about 37 m (40 yd) of outlet spawning.

Stripe Lake #3

Stripe Lake #3 has a low density of >152mm (> 6 in) cutthroat trout. The lake has no spawning potential.

Stripe Lake #4

Stripe Lake #4 contains a low density of >152 mm (>6 in) cutthroat trout. It has no spawning potential.

Waugh Lake

Waugh Lake contains a low density of >152 mm (>6 in) trout. The inlet contains about 14 m (15 yd) of available spawning gravel.

Hamilton Lake #2

Hamilton Lake #2 is barren and is too shallow to support fish. There is no spawning potential.

Cliff Lake

Cliff Lake is barren but has excellent spawning and rearing potential. The inlet contains 4.5 m (5 yd) of spawning gravel and the outlet 46 m (50 yd). This lake was planted with westslope cutthroat from progeny of Fish Lake.

Mush Lake

Mush Lake is barren and too shallow to support fish. No spawning

potential is present at the lake.

Slide Lake

Slide Lake is barren and too shallow to support fish. No spawning potential is present at the lake.

Pot Lake

Pot Lake is barren and has no spawning potential. The lake does have rearing potential and will be scheduled for planting.

Jack Lake

Jack Lake is barren. It is a relatively shallow lake with very minimal spawning potential. We may stock this lake in the future.

McArthur Lake

McArthur Lake has a high density cutthroat fishery. All size ranges available from fry upward. About 41 m (45 yd) of outlet spawning area is available.

Upper Trilby Lake

Upper Trilby Lake has a medium density cutthroat fishery for >152 mm (>6 in) fish. No spawning potential is present.

Middle Trilby Lake

Middle Trilby Lake has a low density of rainbow trout and a high density of rainbow-cutthroat hybrid trout all in the >76 mm (3 in) range. About 30 m (33 yd) of inlet spawning potential is present.

Lower Trilby Lake

Lower Trilby Lake has a high density cutthroat and low density rainbow fishery in the >152 mm (>6 in) range. No spawning potential is present at this lake.

Bleak Creek Lake

Bleak Creek Lake is barren. It is fairly shallow with 18 m (20 yd) of inlet spawning area.

Spread Point Lake

Spread Point Lake has a high density cutthroat population in all size ranges. There is 27 m (30 yd) of good inlet spawning gravel.

Upper Burnt Knob Lake

Upper Burnt Knob Lake is barren and has no spawning potential. This lake could support a trout population and is scheduled for planting every 3 years.

Middle Burnt Knob Lake

Middle Burnt Knob Lake has a high density brook trout fishery. Several age classes were present. Lakeshore spawning is adequate at this lake for brook trout.

Lower Burnt Knob Lake

Lower Burnt Knob Lake has a high density cutthroat and low density rainbow fishery for trout in the >152 mm (6 in) range. There is no spawning potential.

Stillman Lake

Stillman Lake has a low density of cutthroat in the >152 mm (>6 in) range. There is very little inlet spawning potential.

Canyon Creek Lake #17

Canyon Creek Lake #17 is barren. Even though there is adequate spawning potential, the lake is so shallow it assuredly would winter kill. Recommendation will be not to plant.

Canyon Creek Lake #16

Canyon Creek Lake #16 has a low density cutthroat population in the >152 mm (>6 in) range. Grayling had been planted in the past and one large individual was observed. There is about 23 m (25 yd) of inlet spawning potential.

Canyon Creek Lake #15

Canyon Creek Lake #15 contains a medium density of cutthroat in the > 76 mm (>3 in) range. Excellent spawning potential with 69 m (75 yd) of available gravel.

Canyon Creek Lake (between #14 and #15)

Canyon Creek Lake contains a low density cutthroat population which had apparently moved upstream from Canyon Lake #1. It is a small shallow lake with no spawning potential.

Canyon Creek Lake #14

Canyon Creek Lake #14 has a high density cutthroat fishery with many classes. The cutthroat population is stunted as a result of the excellent inlet spawning potential.

Canyon Creek Lake #8

Canyon Creek Lake #8 is barren but appears able to support a fishery. It has 27 m (30 yd) of spawning potential. We will schedule it for planting.

Canyon Creek Lake #13

Canyon Creek Lake #13 has a medium density of cutthroat trout in the >76 mm (>3 in) category. Most fish are large but there is no spawning area.

Canyon Creek Lake #11

Canyon Creek Lake #11 contains a medium density cutthroat fishery for >152 mm (>6 in) trout. Very little outlet spawning area available.

Tillie Lake

Tillie Lake has a medium density cutthroat fishery for >152 mm (>6 in) trout. There is virtually no spawning potential.

Fish Lake (Cedars)

Fish Lake lies at the head of Fish Lake Creek, tributary to the North Fork Clearwater River. Fish Lake has an indigenous population of westslope cutthroat as well as Dolly Varden. The cutthroat are outlet spawners and in the past a portion of the run has been trapped and spawn taken to Clark Fork Hatchery to rear. The goal was to establish a brood stock of the west-slope cutthroat so the race of cutthroat could be expanded to other suitable mountain lakes. During the past 5 years, this stock of fish has been expanded to five other suitable mountain lakes. The brood stock plan was discontinued during 1978 and the remaining fish stocked back in the mountain lakes.

The road up Fish Lake Creek comes within 9.7 km (6 mi) of Fish Lake. From there it is easily reached by hiking, horseback, or two-wheeled motorized vehicle. The fishing season opens on the lake on 1 August of each year and the fishing pressure is fairly heavy. Many limits of cutthroat and Dolly Varden are taken on the opening few days.

The age class structure of the cutthroat has appeared to shift with a reduction of the younger age classes. The cutthroat harvested during the opening weekend of the season averaged 302 mm (11.9 in) compared to 295 mm (11.6 in) in 1976, 281 mm (11.5 in) in 1975, 234 mm (9.2 in) in 1974, and 266 mm (10.5 in) in 1973. There were many schools of 100-105 mm (4-6 in) fish observed in the lake.

During the summers of 1977-1978, the Forest Service initiated a project to enhance the spawning outlet. This work consisted of cleaning the rubble and large cobble, and finally placement of spring gravel into the stream. The gravel was hauled by helicopter to the site since adequate gravel was not available at the lake.

The preparatory work was beneficial and helped the 1978 spawning fish. During the 1976 survey only 50-60 spawning cutthroat were observed, but in 1978 we counted an average of 140 spawners (Al Espinosa, personal communication).

During the coming years, this work will be monitored closely to observe the success. Also, this inclusion of Fish Lake into the wilderness classification will change the use pattern by eliminating the motorized vehicles. Both of

these changes should provide help to the cutthroat population in the lake. This highly valued resource should continue to improve.

We scheduled 81 mountain lakes for planting during 1978. Most of these lakes are planted on a 3-year rotation basis, with a few planted more frequently due to increased fishing pressure.

JOB PERFORMANCE REPORT

State of Idaho Name: REGIONAL FISHERY MANAGEMENT
Project No. F-71-R-3 INVESTIGATIONS
Job No. II-b Title: Region 2 Lowland Lake Investigations
Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

Anglers at Winchester Lake averaged 0.8 fish per hour for the 1978 season. Rainbow trout that had been released as fingerlings made up 57% of the catch on opening weekend.

Hatchery catchable trout made up 96% of the harvest at Waha Lake with coho contributing 4%.

Catch rates at Manns Lake were poor for the 1978 season with 0.4 fish per hour, compared to 1.04 in 1977.

Success at Spring Valley Reservoir ranged from 2.1 to 0.3 fish per hour through the 1978 season.

Catchable rainbow trout at Soldiers Meadow Reservoir were harvested at the rate of 2.4 to 0.8 fish per hour during the 1978 season.

Dworshak Reservoir had a slow fishing season with success for the summer of 0.5 fish per hour and lower. Kokanee averaged 242 mm (9.5 in) and small-mouth bass averaged 305 mm (12 in) in the catch. Kokanee and smallmouth bass spawned successfully during 1978.

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RECOMMENDATIONS

We recommend continuance of the lowland lake investigation in Region 2 to monitor success of fish plants and their contribution to the fishery.

OBJECTIVES

To determine the success of fingerling rainbow plants and their contribution to the fishery in Winchester Lake, Soldiers Meadow Reservoir, Waha Lake, Manns Lake, Spring Valley Reservoir and Dworshak Reservoir.

To determine the return and contribution of catchable rainbow plants in Winchester Lake, Waha Lake, Soldiers Meadow Reservoir, Manns Lake and Dworshak Reservoir.

To determine the contribution of miscellaneous game fish (smallmouth bass, coho, bullhead catfish and other trout species) in Winchester Lake, Dworshak Reservoir and Waha Lake.

TECHNIQUES USED

We used random creel census information gathered by Idaho Department of Fish and Game personnel to obtain catch rate and species composition for the lowland lakes in Region 2. Creel census data is summarized in Appendix 1.

Gill nets were set in five of the lowland lakes as soon as the ice was gone and prior to any fish plants being made.

FINDINGS

Winchester Lake

We set two gill nets in Winchester Lake in 1978. These nets caught 81 rainbow trout, 12 cutthroat trout, 89 rainbow x cutthroat hybrids, and 7 bull-heads; for a total catch of 119 fish in approximately 10 hours each. The hybrids averaged 298 mm (11.7 in); 25.4 mm (1 in) more than the same age rainbow. Both species were in excellent condition.

Anglers averaged 0.80 fish per hour throughout the season sampled at Winchester Lake (Table 1). Success during the ice fishing season was fairly constant through the 45-day season at 1.34 and 1.54 fish per hour. Pressure was fairly constant during the ice fishing season. The general season opened on 27 May, with heavy pressure and success at 0.63 fish per hour. The fingerling catch on opening weekend also included the rainbow x cutthroat hybrids and made up 57% of the total harvest.

The Winchester Dam and spillway was examined during 1978 by the Department of Water Resources and it was determined that repairs were needed or else the dam would be breached and the reservoir drained. We would lose a valuable fishery if the reservoir was drained so repairs will be undertaken during 1979.

Table 1. Angling effort, fish harvest and catch rates for Winchester Lake, 1978

Month	Res.	Non Res.	Hrs.	Rainbow		Hybrids RB x CT	CT	BH	Total	Fish/hour
				Catchable	Fing.					
Jan.	117	5	152	41	159	1	2		203	1.34
Feb.	66	3	157	122	120				242	1.54
April	151	9	339	64	123		4	25	216	0.63
May	38	12	99	64			3		67	0.68
June	62	11	106	12			1	24	37	0.35
July	<u>104</u>	<u>17</u>	<u>334</u>	<u>162</u>	<u> </u>	<u> </u>	<u>1</u>	<u>21</u>	<u>184</u>	<u>0.55</u>
Total	538	57	1,187	465	402	1	11	70	949	0.80

Waha Lake

We did not set any gill nets in Waha during 1978.

Coho salmon were again stocked into the lake. This is the second year this species has been put into Waha Lake. There has been no chemical treatment of the plankton since the coho were introduced.

The coho planted in 1977 were averaging 152 mm (6 in) during the early part of the 1978 fishing season. We have discontinued the fingerling plants of rainbow trout into Waho due to the poor returns exhibited by these fish.

Anglers on opening day harvested fish at the rate of 1.0 fish per hour and averaged 3.8 fish per angler. Hatchery catchable rainbow trout comprised 96% of the harvest with coho salmon contributing 4%.

Manns Lake

We did not set any gill nets in Manns Lake during 1978 due to a late plant of catchable rainbow trout. None of the suckers previously recorded have shown up in the sport fishery.

Manns Lake continues to be a popular fishing area with the local residents. Fishing success was not as good during 1978 (0.38 fish per hour) as it was in 1977 (1.04 fish per hour) (Table 2). This low catch rate cannot be explained since number of catchable trout stocked was similar each year.

Spring Valley Reservoir

We interviewed 63 anglers during the ice fishing season who had caught 207 trout for a catch rate of 1.45 fish per hour. This fishery continues to be very popular.

During the general fishing season, we interviewed 446 anglers (92% resident) (Table 3). Success ranged from 2.1 fish per hour on the opening weekend to a low of 0.3 per hour at the end of the season. This reservoir continues to draw a lot of attention especially during the early part of the season.

Soldiers Meadow Reservoir

During 1978, only catchable trout were stocked in Soldiers Meadow Reservoir. Angler success was good, ranging from 2.47 to 0.80 fish per hour. We interviewed 268 anglers (93% residents) who harvested 455 rainbow trout (Table 4).

This reservoir stayed full all summer and the catchable rainbow trout that were planted averaged 6.1/kg (3/lb) and by the time the season closed some of these fish were 355 to 406 mm (14 to 16 in). The tape worm Proteocephalus had been prevalent in the trout population in recent years. The reservoir was drawn down and all fish eradicated with rotenone in September 1977, with the hope of breaking the life cycle of the parasite. The reservoir remained void of fish until April, 1978 when it was restocked with catchable rainbow. No parasites were observed in trout examined in 1978. Growth and survival of planted trout will improve if the parasite remains at a low level.

Table 2. Angling effort, harvest and catch rates for Manns Lake, 1978

Month	Res.	Non Res.	Hrs.	Trout	Bass	Total	Fish/hour
April	53	0	93	31	1	32	0.34
May	6	0	19	14		14	0.74
June	<u>20</u>	<u>0</u>	<u>42</u>	<u>12</u>	<u>—</u>	<u>12</u>	<u>0.29</u>
Total	79	0	154	57	1	58	0.38

Table 3. Angling effort, harvest and catch rates for Spring Valley, 1978

Month	Res.	Non Res.	Hrs.	Trout		Bass	Total	Fish/hour
				Hatchery	Fing.			
Jan.	39	3	105	88	44		132	1.26
Feb.	21	0	37	48	27		75	2.02
April	144		322	661	22	2	685	2.12
May	105	7	249	206		6	212	0.85
June	91	10	191	167		37	204	1.06
July	36	6	90	48		13	61	0.67
Aug.	21	10	76	28		23	51	0.67
Sept.	<u>12</u>	<u>4</u>	<u>57</u>	<u>16</u>	<u>—</u>	<u>—</u>	<u>16</u>	<u>0.23</u>
Total	469	40	1,127	1,262	93	81	1,436	1.27

Table 4. Angling effort, harvest and catch rates for Soldiers Meadow, 1978,

Month	Res.	Res.	Hrs.	Trout	Fish/hour
May	39	1	51	126	2.47
June	204	19	395	325	0.82
July	<u>5</u>	<u>—</u>	<u>5</u>	<u>4</u>	<u>0.80</u>
Total	248	20	451	455	1.00

Dworshak Reservoir

Dworshak Reservoir is a 85 km (53 mi) long reservoir with annual vertical drawdown of 46 m (150 ft). This reservoir is continuing to become more popular, especially as the anglers become familiar with, and are able to catch the kokanee and smallmouth bass.

Due to the construction at Dworshak Hatchery, the mitigation goal for the reservoir was not met during 1978. Dworshak Hatchery stocked the reservoir with 1,700 catchable rainbow trout, 1,904 adult steelhead that were surplus to the hatchery needs and 59,300 kokanee.

The fishing was slow for most of the summer with kokanee making up the bulk (59%) of the harvest checked through Big Eddy boat ramp. Rainbow trout (22%) and smallmouth bass (16%) were the other species caught with any regularity. Incidental catches of cutthroat, Dolly Varden, Eastern brook trout, whitefish and bullhead catfish were recorded.

During the summer months we had a YACC employee check anglers at the Big Eddy boat ramp. We collected lengths of smallmouth bass and kokanee during the summer months. The smallmouth bass averaged 305 mm (12 in) (Fig. 1), and the kokanee averaged 242 mm (9.5 in) (Fig. 2) for the 1978 summer season.

We interviewed 2,196 anglers who had fished a total of 10,945 hours to harvest 2,350 kokanee, 841 rainbow trout (34% catchables), 525 smallmouth bass, 18 bullheads, 6 cutthroat, 5 Dolly Varden, 3 whitefish and 2 brook trout for an overall catch rate for the summer of 0.34 fish per hour (Table 5).

The reservoir was completely filled during the summer of 1978 and stayed fairly stable until after Labor Day.

Kokanee escapement into the tributaries above Grandad Bridge was good this year with good numbers of spawners in the Little North Fork and tributaries. These fish ranged from 254 to 330 mm (10 to 13 in). No total estimate is available.

The trapping facilities at Elk Creek were not used during 1978.

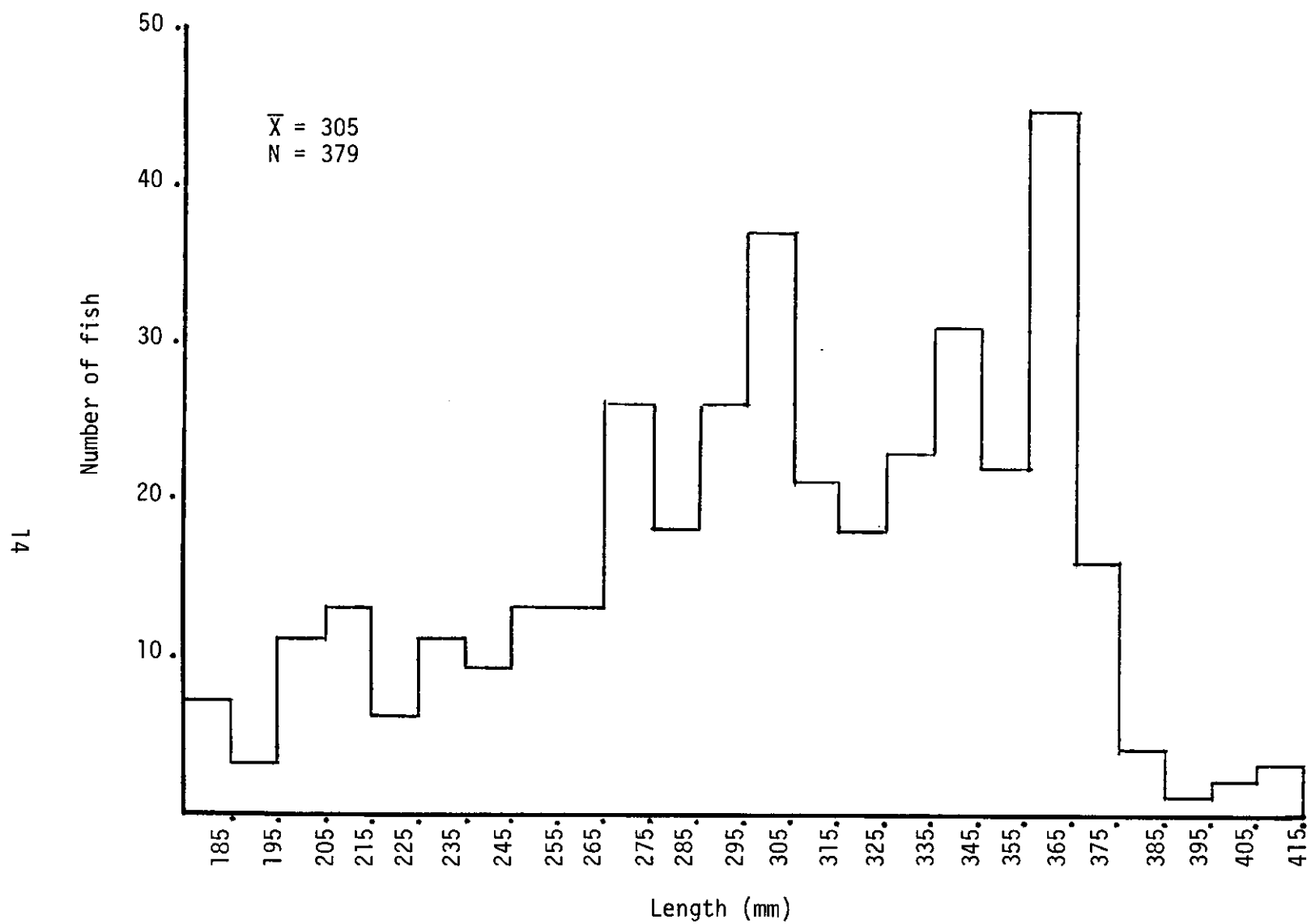


Figure 1. Length frequency of smallmouth bass taken from angler creels Dworshak Reservoir, 1978.

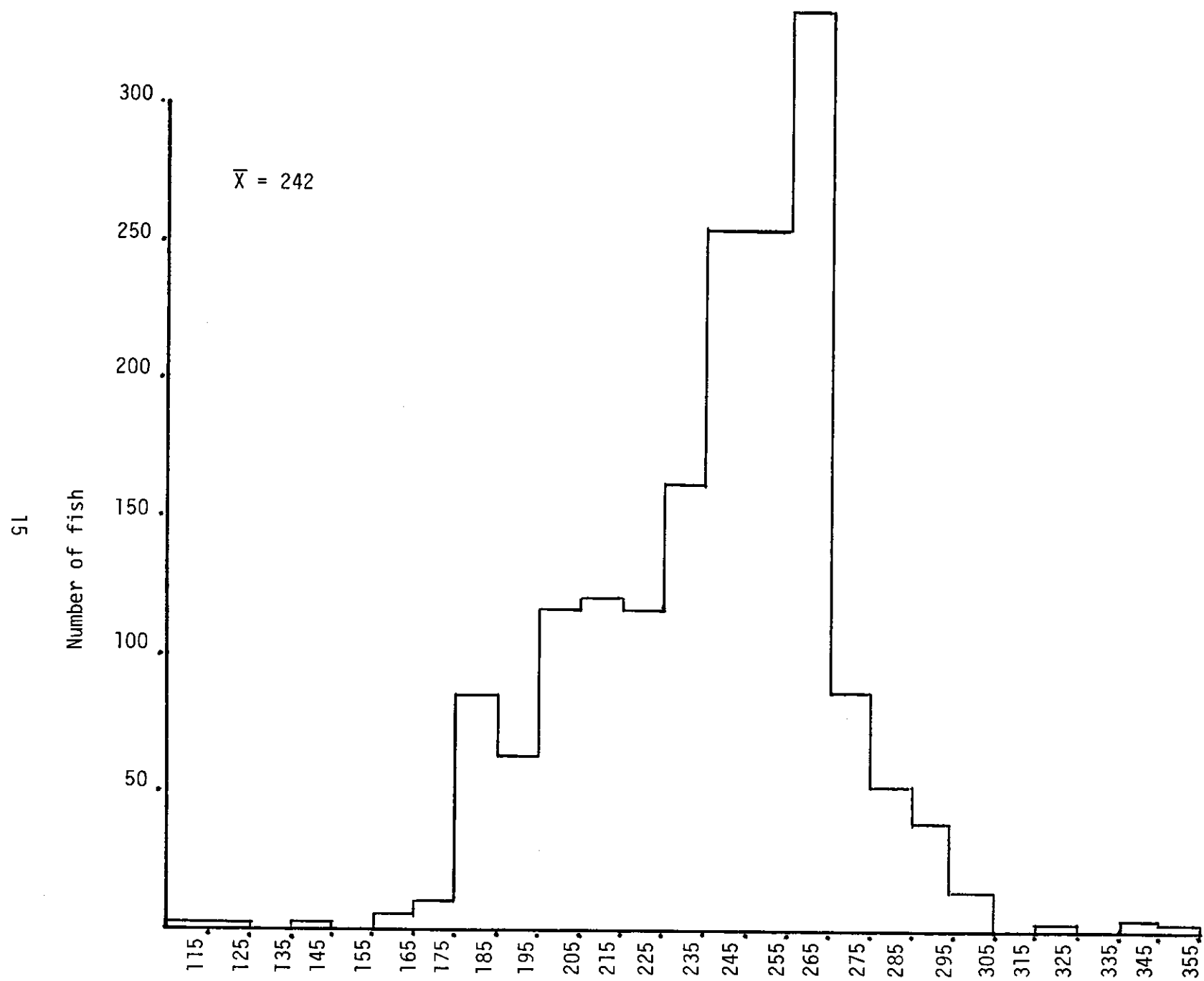


Figure 2. Length frequency of kokanee taken from anglers creels
Dworshak Reservoir, 1978.

Table 5. Angling effort, harvest and catch rates for Dworshak Reservoir from Big Eddy 27
May to 4 September 1978.

Month	Anglers	Hrs.	Rainbow		KOK	SMB	CT	BBH	WF	DV	EB	Total	Fish/hour
			Catchable	Fing.									
April	20	29	39		2	1						42	1.45
May	255	1,142	35	135	15	20		2	3	5	2	217	0.19
June	518	2,289	81	158	240	47	1	3				530	0.23
July	716	3,786	69	177	1,093	155	4					1,498	0.39
Aug.	529	2,736	61	72	921	229	1	13				1,297	0.47
Sept.	158	963	7	7	79	73						166	0.17
Total	2,196	10,945	292	549	2,350	525	6	18	3	5	2	3,750	0.34

JOB PERFORMANCE REPORT

State of Idaho

Name: REGIONAL FISHERY MANAGEMENT
INVESTIGATIONS

Project No. F-71-R-3

Title: Region 2 Stream Investigations

Job No. II-c

Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

Due to time restraints, the stream investigations portion of the Regional Fishery Management Investigations was not adequately programmed.

Numerous largemouth bass and rainbow fingerlings were found in the stream below Moose Creek Reservoir.

The Palouse River was investigated to determine its adequacy to support a brown trout fishery.

U.S. Forest Service personnel made surveys of Wilkerson Creek and the Little Clearwater River, tributaries to the upper Selway River.

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RECOMMENDATIONS

We recommend continuance of the stream investigations to obtain current information on streams in Region 2.

OBJECTIVES

To obtain baseline data on streams in Region 2 prior to their being impacted by activities such as logging or cattle grazing.

To obtain information on species composition in various streams in Region 2.

TECHNIQUES USED

Surveys were made on streams in Region 2 utilizing standard fishing gear and electrofishing equipment. Random creel checks were reported by Conservation Officers and other Department personnel for 45 streams in Region 2. This data is summarized in Appendix 1.

FINDINGS

Moose Creek

During 1976 our Department placed 300 adult largemouth bass in Moose Creek Reservoir. Reproduction had taken place in the reservoir and during a shocking investigation of Moose Creek, below the reservoir, we found 29 bass fingerling between 100-150 mm (3.9-5.9 in). These fish were released back into the reservoir. It appears bass reproduction is being flushed out of the reservoir during spring runoff. During the same operation we also found three catchable rainbow which has been released initially into the reservoir and 13 juvenile wild rainbow. The severity of the loss of bass from the reservoir will have to be monitored by analyzing the success of the bass fishery during the coming years.

Palouse River

Brown trout have been successfully introduced into several areas of the state where they would have no impact on anadromous fisheries and have been enhancing the quality of fishing in the areas introduced.

A portion of the Palouse River between Laird Park and Princeton has had a change in water quality which makes it marginal for rainbow and cutthroat, but still adequate to support a brown trout fishery. Since the river flows into Washington and over several major falls before it enters the Snake River below Lower Granite Dam, it was decided an introduction of brown trout may be beneficial. Brown trout will be introduced into the system during 1979, if available.

Wilkerson Creek

Wilkerson Creek, tributary to the upper Selway River, was surveyed by Forest Service personnel from the West Fork Ranger District during the summer

of 1978. Wilkerson Creek has potential as an excellent producer of anadromous fishes. However, during the survey, numerous large, impassable log jams were documented in the first 11 km (7 mi) above the mouth. It was determined to be impracticable if not impossible to remove these jams for fish passage.

Little Clearwater River

The Little Clearwater River is also a tributary to the upper Selway River drainage. Metsker (1968) noted several migration barriers on the stream. The Forest Service survey of the main river system could not document any of these blockages. Adult chinook salmon were also observed in the upper areas of the drainage. We therefore anticipate no complete blockages now exist on the stream and this will provide further enhancement to our anadromous fishery program in the area.

JOB PERFORMANCE REPORT

State of Idaho Name: REGIONAL FISHERY MANAGEMENT
Project No. F-71-R-3 INVESTIGATIONS
Job No. II-d Title: Region 2 Technical Guidance
Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

Comments or inspections were made on 129 permit applications from eight different agencies.

Oral comments increased substantially, especially on U.S. Forest Service Unit Plans.

The Clearwater Economic Development Association was very active and consumed a substantial amount of time and effort.

Authors:

Wesley Cannon
Regional Fishery Manager

Steven A. Boss
Regional Fishery Biologist

RECOMMENDATIONS

We recommend continuance of the technical guidance program to insure professional and timely input into projects and programs effecting the fishery within Region 2.

OBJECTIVES

To assist other agencies and private citizens with technical assistance regarding timber sale, highway construction, stream alterations, private pond operations and pollution discharge permits.

We will assist local sportsman groups and Explorer Post with habitat improvement projects where fisheries will benefit.

To make comments on Environmental Impact Statements with regard to fisheries in Region 2.

TECHNIQUES USED

Fishery management personnel were available for comments and technical guidance on all Department of Water Resource Permit applications and for additional input through personal communications.

Solicitations from all other State, Federal and private individuals for fisheries expertise were promptly answered and several on location observations with resulting comments were accomplished.

FINDINGS

On site inspection or written comments were made on 24 stream alteration permit applications submitted by the Department of Water Resources. The permit applications ranged from small bank stabilization projects to major road relocations. After the fact applications were not the problem they had been in previous years. Perhaps our Department's pressure against such applications has had some effect.

We processed a total of 129 various documents during the year. A compilation of the agencies and numbers of statements is contained in Table 1.

Table 1. Agency and Number of Documents commented upon in Region 2, 1978.

Agency	Number of Documents
Bureau of Land Management	5
Corps of Engineers	19
U.S. Forest Service	19
Environmental Protection Agency	3
Idaho Department of Lands	19
State Clearinghouse	12
Department of Transportation	21
Department of Water Resource	24
Miscellaneous	7
Total	129

This total of 129 is 12% of the 1,051 applications commented upon state-wide.

Increased input is being required by Forest Service Ranger Districts during formation of local Management Plans. A substantial amount of this input is oral and does not appear on the written record.

Technical assistance was given to only one new farm pond permit. However, we analyzed 45 permit renewals.

Several days worth of time were spent working closely with the Clearwater Economic Development Association (CEDA) concerning non-point pollution sources under the 208 program. Problem areas have been identified and solutions are presently being formulated.

JOB PERFORMANCE REPORT

State of Idaho

Name: REGION 2 FISHERY MANAGEMENT
INVESTIGATIONS

Project No. F-71-R-3

Title: Salmon and Steelhead Investigations

Job No. II-e

Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

The Clearwater River drainage had approximately the same amount of returning adult chinook salmon in 1978 as 1977. Extremely poor observation conditions on the Selway River aerial count produced an unreliable survey.

Chinook incubation channels in Region 2 received 3,385,767 eyed eggs during the fall of 1978. Channel tenders were again hired to monitor flows.

We enumerated 1,458,980 emigrating chinook fry from the 2,740,470 eyed eggs planted in the fall of 1977 at Indian Creek incubation channel.

The 1978 spring steelhead season on the Clearwater River was excellent with an estimated total of 8,964 steelhead harvested. The fall 1978 catch-and-release season on the Clearwater has an estimated 2,229 fish caught.

Surplus steelhead fry and adults from Dworshak Hatchery were transported to various tributaries of the Lochsa and South Fork Clearwater River drainages.

Authors:

Wesley Cannon
Regional Fishery Manager

Steven A. Hoss
Regional Fishery Biologist

OBJECTIVES

To monitor salmon and steelhead spawning trends and to evaluate sport angler effort and success on anadromous fish. To develop management recommendations.

TECHNIQUES USED

Aerial and ground counts were made on selected ground trend areas to monitor numbers and success of spawning salmon. Creel census was taken by streamside interviews to evaluate angler effort and success on anadromous fish. Spawning surveys, creel census, dam counts, hatchery returns and tag and mark returns were collected to develop management recommendations.

FINDINGS

Spring Chinook Salmon

Chinook fry are enumerated annually as they emigrate out of the incubation channel at Indian Creek. From the 2,740,470 eyed eggs placed in the channel during the fall of 1977, we enumerated 1,458,980 emigrating fry. This is a survival rate of 56.4% from eyed eggs to emigrating fry and has to be considered as very successful.

The Clearwater River system had a very comparable number of returning adults in 1978 as in 1977. During the spawning ground surveys it was found trend areas would be only slightly higher or lower than the previous year. The most extensive survey is made on the upper Selway River and due to an extended period of inclement weather, the survey had to be performed under less than desirable conditions. This made the reliability of the survey extremely suspect. An estimated 3,081 spring chinook salmon entered the Clearwater River system in 1978.

We expect a relatively small run of 2-year ocean adults to return in 1979. Only three Jacks were noticed in the entire spawning ground survey and that is an extremely small number compared with the total run.

The South Fork of the Clearwater River is showing the greatest relative returns. Since annual redd count surveys were started in 1974, the fish numbers have increased from an estimated 300 to an estimated 735 adults during 1978.

During the fall of 1978, Indian Creek and Crooked River incubation channels received a total of 3,385,767 eyed chinook eggs. Indian Creek channel received 2,135,767 of these eyed eggs, with Crooked River receiving the remaining 1,250,000. All eggs are from Rapid River Hatchery progeny and eyed in various stations about the state. Both channels have tenders monitoring flows throughout the winter to insure egg and fry survival.

Steelhead Trout

The spring steelhead season on the Clearwater River was exceptional. Pettit and Lindland (1978) estimated the spring season, which lasted from 1 January through 16 April, produced a harvest of 8,964 fish. It appeared that shore anglers had considerably better success than boat anglers which was probably caused by the extreme low flows from the previous summer's drought. Shore anglers caught an estimated 6,190 steelhead at a success rate of 10.8 hours per fish. Boat anglers caught a total of 2,774 steelhead at a success rate of 14.5 hours per fish.

Originally it was anticipated we would have no fall steelhead season of any type in the Clearwater drainage. However, counts across Lower Granite Dam, and the large portion which appeared to be group B stock, indicated there would be an adequate number of Dworshak Hatchery fish to have a catch-and-release season. A non-consumptive season was therefore initiated where steelhead could be taken with single barbless hooks and no bait.

During the 1978 fall catch-and-release season, shore anglers caught an estimated 867 fish for an average of 5.7 hours per fish. Of the 867 steelhead taken by the shore anglers, 236 were taken by Nez Perce tribal members and killed. Boat anglers caught an estimated 1,598 fish for an average of 3.8 hours per fish. The total catch by all anglers was 2,465 steelhead and the catch rates were phenomenal.

Dworshak Hatchery had numerous surplus steelhead fry available during the spring of 1978. We released these surplus fry into various streams in the Clearwater drainage where suitable rearing habitat was available. These areas and numbers of fish planted are as follows:

Lolo Creek	520,000
Lochsa River tributaries	1,700,000
South Fork Clearwater tributaries.....	1,025,000

In addition, we assisted in placing 882,750 eyed steelhead eggs into Red River incubation channel which is being maintained and operated by the U.S. Forest Service, Red River Ranger District.

Excess adult steelhead were also distributed about the Region from Dworshak Hatchery. The areas and numbers of unspawned adults released are as follows:

Lolo Creek	800
Potlatch Creek	280
Crooked River	660
Red River	350
South Fork Clearwater River.....	800
Newsome Creek	672

Progeny from these adults should assist in enhancing the runs of steel-head into all of these drainages.

APPENDIX 1

CREEL CENSUS SUMMARY Fishery

Management Region 2, 1978

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Water	Month	Res.	Non-Res.	RB	HRB	CT	BK	Fish Caught					SB	LB	CC	Perch	Hrs.	F/Hr.	F/A
								DV	BC	WF									
RIVERS & STREAMS																			
South Fork Clearwater River	Feb.	13								34							41	0.8	2.6
	May	2	2	4													8	0.5	1.0
	June	16	4	9	2	1		4									30	0.5	0.8
	July	19	9	23	1	1		2									47	0.6	1.0
	Aug.	7	6	26	1	1											25	1.1	2.2
	Sept.	7															13	0.0	0.0
Crooked River	May	14		4													30	0.1	0.3
	June	6	1	1	2			2									9	0.6	0.7
	July	20	2	3	44					1							47	1.0	2.2
	Aug.	20	4	5	28												46	0.7	1.4
Red River	May		2	1				1									2	1.0	1.0
	June	1			2												1	2.0	2.0
	July	15	13	19	8												65	0.4	1.0
	Aug.	3	5	5		1	1										6	1.1	0.9
Newsome Creek	May	10		1		2											34	0.1	0.3
	June	13			2	1											21	0.1	0.2
	July	17	19	11		2											28	0.5	0.4
	Aug.	17	1	7	9	5											35	0.6	1.3
Big Elk Creek	May	2					1										2	0.5	0.5
Red Horse Creek	June	4			6												12	0.5	1.5
Selway River	July	17	3	10						2							40	0.3	0.6
Bear Creek	July	4	0			3											8	0.4	0.8

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Water	Month	Res.	Non-Res.	Fish Caught											Hrs.	F/Hr.	F/A	
				RB	HRB	CT	BK	DV	BC	WF	SB	LB	CC	Perch				
RIVERS & STREAMS (continued)																		
Clearwater River	June	3														5	0.0	0.0
	July	9										1				1	1.0	0.1
Lapwai Creek	May	19	2	42	11	1						1				28	1.6	2.6
	June	5		4		6										13	0.8	2.0
Orofino Creek	May	2		2			3									4	1.2	2.5
Snake River	Feb.	31	4	8												55	0.2	0.3
	Mar.	40	2	6										2		160	0.0	0.1
	Apr.	23		4										5	3	90	0.1	0.5
	May	45	2	3							24			5		132	0.2	0.7
	June	6		12							2					40	0.4	2.3
	July	14		6							6			1		44	0.3	0.9
Palouse River	Apr.	12	8	33												43	0.8	1.7
	May	8		15												26	0.6	1.9
	June	1	2	14												12	1.2	4.7
	July	2	2	8												25	0.3	2.0
	Sept.	2	3	4												21	0.2	0.8
Big Sand Creek	May	8					6									2	3.0	0.8
White Sand Creek	Aug.	3				3		3								6	1.0	2.0
Brushy Creek	Aug.	2	3	5	10	1										4	4.0	3.2
Skookum Creek	July	2			5											6	0.8	2.5
Browns Creek	May	9					26									9	2.9	2.9
Mussle Shell Creek	June	5					15									20	0.8	3.0

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Water	Month	Res.	Non-Res.	RB	HRB	CT	BK	Fish Caught						Hrs.	F/Hr.	F/A	
								DV	BC	WF	SB	LB	CC				Perch
RIVERS & STREAMS (continued)																	
Eagle Creek	July	2		7											2	3.5	3.5
Crooked Creek	June		1												2	0.0	0.0
Rice Creek	June	5		1											4	0.3	0.2
Meadow Creek	Aug.	6					9								6	1.5	1.5
Graves Creek	May	19		23											22	1.0	1.2
Big Creek	July	2	3	12											8	1.5	2.4
Deer Creek	May	4					7								4	1.8	1.8
	June	3	2				1								2	0.5	0.2
Whitebird Creek	June	4		3											8	0.4	0.8
	July	3		1											3	0.3	0.3
Bargamin Creek	July		3	7											9	0.8	2.3
	Aug.	4		2											4	0.5	0.5
Skookumchuck Creek	May	8		13			7								16	1.3	2.5
	June	5		5											13	0.4	1.0
	July	2													2	0.0	0.0
Slate Creek	May	7		10											16	0.6	1.4
	June	2													2	0.0	0.0

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Water	Month	Fish Caught												Hrs.	F/Hr.	F/A	
		Res.	Non-Res.	RB	HRB	CT	BK	DV	BC	WF	SB	LB	CC				Perch
RIVERS & STREAMS (continued)																	
North Fork Clearwater	Mar.	14		26		3				14					23	1.9	3.1
	Apr.	42		11		9				318					116	2.9	8.0
	May	67	2	6		35		8		108					181	1.3	2.1
	June	26	2	3		11		7		2					25	0.9	0.8
	July	52	12	33		30	1	3		1					83	0.8	1.1
	Aug.	45	12	27		14		3		1					129	0.3	0.8
	Sept.	16	6	4		2									14	0.4	0.3
Skull Creek	May	11		6		9									27	0.6	1.4
	June	2		3											2	1.5	1.5
	July	6		16		4									16	1.3	3.3
	Aug.	18	1	62		12		1							60	1.3	3.9
	Sept.	6		11		1									12	1.0	2.0
Elk Creek	May	4		14											7	2.0	3.5
Reeds Creek	May	2					4								2	2.0	2.0
Orogrande Creek	May	3		1											3	0.3	0.3
	June	3		6		2									9	0.9	2.7
	July	5		4		3									3	2.3	1.4
Black Canyon	July	10				3		2							21	0.2	0.5
North Fork-below dam	June	5	3	1											8	0.5	0.8
Feder Creek	May	1					3								1	3.0	3.0
Kelly Creek	July	1					15								3	5.0	15.0
Lake Creek	Aug.	5	1	3		2		1							8	1.1	1.6

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Water	Month	Fish Caught													Hrs.	F/Hr.	F/A
		Res.	Non-Res.	RB	HRB	CT	BK	DV	BC	WF	SB	LB	CC	Perch			
RIVERS & STREAMS (continued)																	
Isabella Creek	Sept.	6		7											4	1.8	1.2
Beaver Creek	June	7		16											26	0.6	2.3
Long Creek	Sept.	2		1		1		1							1	3.0	1.5
Quartz Creek	June		1	1											1	1.0	1.0
Weitas Creek	Sept.	5		5		4									5	1.8	1.8

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1977

Water	Month	Fish Caught												Hrs.	F/Hr.	F/A	
		Res.	Non-Res.	Both	RB	HRB	CT	BK	CO	BC	WF	SB	LB				KOK
LAKES & RESERVOIRS (continued)																	
Winchester Lake	April	151	9		123	64	4			25					339	0.6	1.4
	May	38	12			64	3								99	0.7	1.3
	June	62	11			12	1			24					106	0.3	0.5
	July	<u>104</u>	<u>17</u>			<u>162</u>	<u>1</u>			<u>21</u>					<u>334</u>	<u>0.6</u>	<u>1.5</u>
Subtotal		355	49		123	306	9			70					878	0.6	1.3
Moose Creek Reservoir	May	50				97									120	1.9	0.8
	June	14				15									24	0.6	1.1
	July	<u>3</u>				<u>2</u>									<u>5</u>	<u>0.4</u>	<u>0.7</u>
Subtotal		67				114									149	0.8	1.7
Soldiers Meadow Reservoir	May	39	1			126									51	2.4	3.2
	June	204	19			325									395	0.8	1.5
	July	<u>5</u>				<u>4</u>									<u>5</u>	<u>0.8</u>	<u>0.8</u>
Subtotal		248	20			455									451	1.0	1.7
Totals		1393	109		145	2709	9	6	18	70			83		3228		
Percent		92.7	7.3		4.8	89.1	-	-	1.0	2.3			2.8				
Average																0.9	2.0

Dworshak is included in another portion of report.

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1977

Water	Month	Res.	Non-Res.	Both	Fish Caught										Hrs.	F/Hr.	F/A
					RB	HRB	CT	BK	CO	BC	WF	SB	LB	KOK			
LAKES & RESERVOIRS																	
Spring Valley Reservoir	April	144			22	661							2		322	2.1	4.7
	May	105	7			206							6		249	0.9	1.9
	June	91	10			167							37		191	1.1	2.0
	July	36	6			48							13		90	0.7	1.5
	Aug.	21	10			28							23		76	0.7	1.6
	Sept.	12	4			16									57	0.3	1.0
Subtotal		409	37		22	1126							81		985	1.2	2.8
Campbells Pond	April	81				185		4							151	1.3	2.3
	May	55				82		2							104	0.8	1.5
Subtotal		136				267		6							255	1.1	2.0
Waha Lake	April	92				336			13						349	1.0	3.8
	June	1	3									No fish			4	0.0	0.0
	July	2							5						3	1.7	2.5
Subtotal		95	3			336			18						356	1.0	3.6
Manns Lake	April	53				31							1		93	0.3	0.6
	May	6				14									19	0.7	2.3
	June	20				12									42	0.3	0.6
Subtotal		79				57							1		154	0.4	0.7
Elk Creek Reservoir	June	4													4	0.5	0.5

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Water	Month	Angler			Fish Caught										Hrs.	F/Hr.	F/A
		Res.	Non-Res.	Both	RB	HRB	CT	BK	DV	BC	WF	SB	LB	KOK			
HIGH MOUNTAIN LAKES																	
Beaver Lake	Aug.	2					4								10	0.4	2.0
Wild Horse Lake	Aug.	1			1		1								3	0.3	1.0
Moores Lake	July		3				24	2							12	2.2	8.7
Lower Slate Lake	July	2						7							4	1.7	3.5

CREEL CENSUS SUMMARY

Fishery Management Region 2, 1978

Res. - Resident Angler
Non-Res. - Non-resident Angler
Both - Resident & Non-resident Angler
RB - Rainbow Trout
HRB - Hatchery Rainbow Trout
CT - Cutthroat Trout
BK - Brook Trout
DV - Dolly Varden
BC - Bullhead Catfish
WF - Whitefish
SM - Smallmouth Bass
LB - Largemouth Bass
SH - Steelhead
KOK - Kokanee
CC - Channel Catfish
GT - Golden Trout
CO - Coho

Submitted by;

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